

3.3 DISCUSSION OF HARVEST POLICY ALTERNATIVES

Policy No. 4: Sustainable, Even-Flow Timber Harvest

The preferred policy states:

The department will manage state forest lands to produce a sustainable, even-flow harvest of timber, subject to economic, environmental and regulatory considerations. (current policy)

Three alternative policies were considered by the department.

Alternative 1: The department intends to maximize the long-term even flow of timber from state forest land.

Alternative 2: The department intends to maximize the long-term net returns from state forest land, subject to other economic, environmental and social considerations. Although maximum net returns will be the primary goal, the regulated harvest will be modified to account for geographic considerations and objectives.

Alternative 3 is the no-policy option. It would allow the department to comply only with the sustained yield requirements of the statute. Because sustained yield allows for major fluctuations in timber harvest, the amount of timber sold in any given year could vary substantially.

Background

The department's long-standing policy has been to harvest timber at a "sustainable, even flow" rate. State statute only requires the department to harvest timber at a "sustained yield," which is a more flexible formula that allows major fluctuations in harvest level so long as there are no prolonged periods of curtailment or cessation.

The department historically has adopted the more rigorous, even-flow standard and does not plan to change this policy for the planning period. The reason, as explained below, is that the sustained yield requirement would allow the department to harvest very heavily now (and unduly favor present trust beneficiaries) or harvest little now (and unduly favor future beneficiaries). The preferred policy, in contrast, allows the department to meet its legal duties as a trustee by providing for even-flow harvest of timber from state forest land, thus providing long-term stable harvests for both current and future beneficiaries.

During the decade of the 1980s, the department harvested about 756 million board feet of timber per year (equivalent to about 29,000 acres), based on its sustainable, even-flow calculations. For the purposes of the Forest Resource Plan, which will remain in effect between 1992 and 2002, the department is planning to harvest less than in the 1980s, though the exact amount has yet to be determined. The decline in the amount to be harvested is a result of new regulatory restraints, changing management practices and other factors.

Because of uncertainty in proposed regulations and a forest inventory update now in process, the department has not calculated precise harvest numbers for each year in the 1990s at the present time.

In 1991, the department estimated the average annual harvest level for the coming decade to be 840 million board feet (MMBF), as follows, which consists of the following components:

Eastern Washington Harvest: 87 MMBF
Western Washington Harvest: 753 MMBF

TOTAL AVERAGE ANNUAL HARVEST 840 MMBF

The harvest estimates, however, were reduced because of the impacts of federal and state regulations, particularly as they affected the Northern Spotted Owl, which was listed by the federal government as a threatened species. In addition to the owl restrictions, the department reduced the harvest estimate to provide for green tree retention (reserve trees), riparian management zones and other environmental and regulatory restraints. These reductions total approximately 165 MMBF per year.

The department's best estimate of what can actually be sold in the next few years is as follows:

1992: 550 MMBF
1993: 650 MMBF
1994-96: 675 MMBF

These levels are for the fiscal year, which begins July 1 and ends June 30 of the following year.

These numbers will likely change. The department expects to have the new harvest levels calculated in early 1993.

Comparison of Alternatives and Environmental Impacts

The **preferred policy** (current policy) requires the department to schedule harvests to produce a sustainable, even-flow harvest of timber from state forest lands. It also directs the department to consider economic, environmental and regulatory considerations when developing harvest schedules.

By following this policy, the department acknowledges that timber sales and harvesting activities must respond to changing regulatory and environmental requirements. The even-flow requirement allows the department to minimize fluctuations and prevent major cessations in timber sales; it also requires the department to consider environmental restraints.

Alternative 1 would produce the maximum, statewide timber volume over the long term. Under this alternative, economic and regulatory considerations beyond those required by law would not influence the department's harvest calculations. This alternative would create the highest environmental impact because the department would be required to produce the maximum amount of volume from state forest lands. Increased site preparation, roads and logging would likely result. Nor would the volume cut be sensitive to geographic considerations or to other environmental factors, other than those spelled out in the Forest Practices Act and related statutes and regulations. Following this alternative could lead to significant problems for both short-term and long-term planning by trust beneficiaries and to regional or community instability as harvesting activities shift from one area of the state to another to maximize income.

Alternative 2 differs from the preferred policy because long-term net returns (cash) from state forest land would be the standard rather than stable, long-term production of timber. Because the amount of timber harvested is chiefly a function of the department's costs, the department could likely harvest least-cost sites first and attempt to obtain the maximum amount of revenues now (when the state's population is growing and there is a demand for educational services).

Timber volumes would likely fluctuate substantially from year to year (more so than under the preferred policy). The department's ability to predict revenues over time has great uncertainty because market prices fluctuate significantly, and the department has no control over these conditions. If this alternative were adopted, the department would run the risk of overharvesting timber during periods when timber prices were low.

The harvest of more timber when prices were low would likely cause prices to drop even farther as the amount of timber on the market increased. This could potentially cause more decreases in the price of timber, which would require the department to harvest even more, etc. The preferred policy, in contrast, allows the department to sell timber based on an even-flow, sustainable harvest calculations.

Alternative 3, the no-policy option, means that the department would not have a policy to guide it in setting timber harvest calculations. It could comply with the sustainable yield statute or adopt any of the alternatives above; it could change its policy within the planning period rather than adopt a consistent approach approved by the Board of Natural Resources.

If Alternative 3 were adopted, the department could, for instance, harvest timber at a 40-year rotation age (and accelerate present cut) or a 100-year rotation age (and accelerate the harvest 30 or 40 years from now). The 40-year rotation age would reduce timber for the trusts in the future while the 100-year rotation age would sharply reduce timber for present beneficiaries. Because of the wide swings in harvestable timber, the department has rejected this alternative. It believes that following only the requirements of this statute would violate the common law duties to the trust beneficiaries.

The decision to adopt a sustainable even-flow harvest (as the preferred policy requires) will impact the amount of land to be harvested in the next 10 years. The sustainable harvest calculations, when combined with the ownership groups described in Policy No. 6 and 7, will result in different rotation (cutting) ages of timber on state forest lands.

In Western Washington, for example, the average rotation age will be 60 years. If the department were to vary the rotation age substantially (such as, choosing a rotation age of 50 years or 80), it would no longer be harvesting timber according to the sustainable, even-flow policy, as Table 4 below illustrates.

Table 3 shows an inventory of state forest land by age classification (by acreage) in Western Washington. This inventory is approximate. It includes both on-base and off-base lands.

Table 4 shows the effect that changing the rotation age will have on harvest levels (in millions of board feet).

TABLE 3
Inventory By Age Classification on State Forest Lands
Western Washington Only*

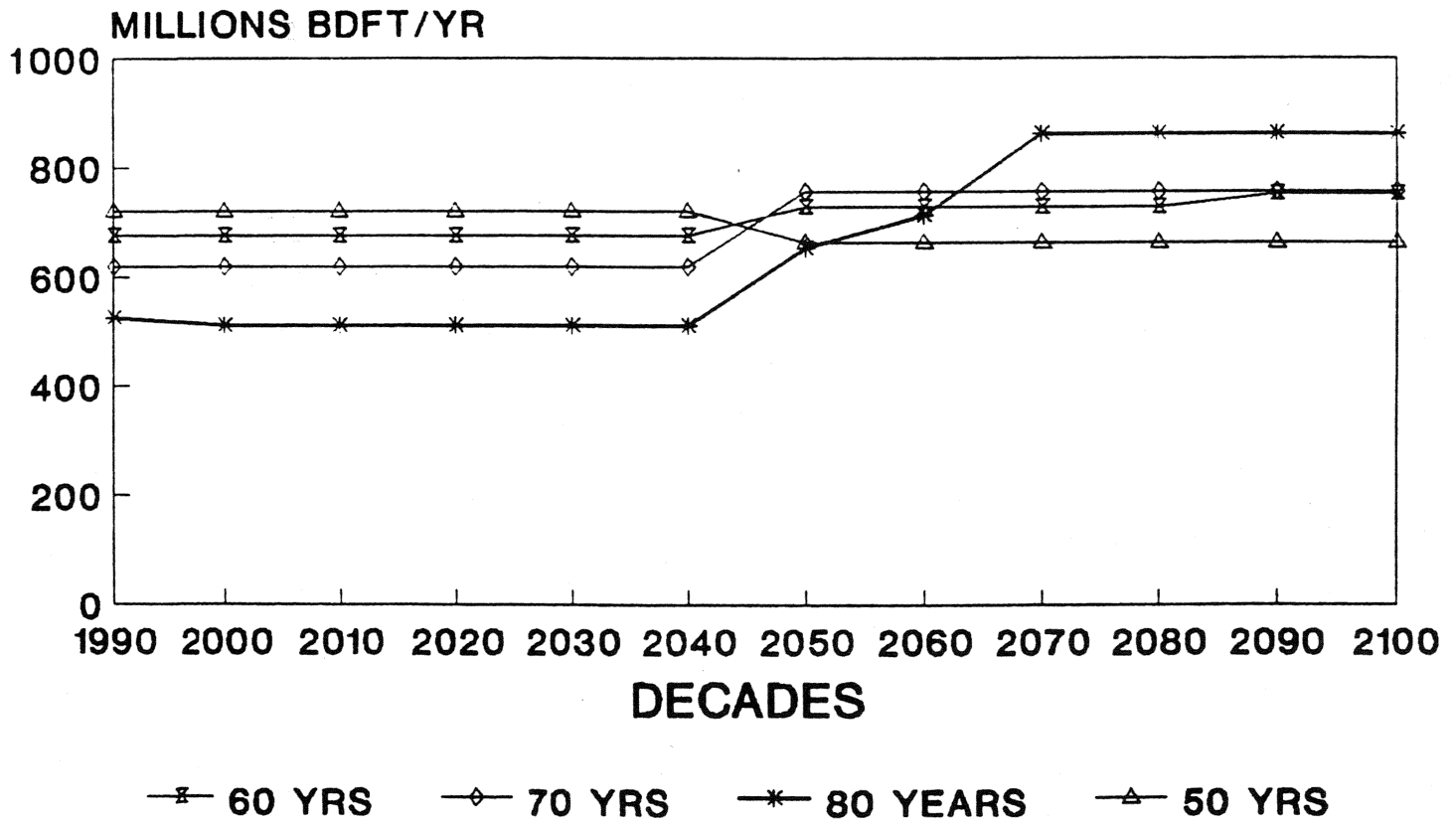
Age of Timber:	Approximate Acreage:
155+	94,120
95-154	50,510
85-94	25,540
75-84	38,210
65-74	89,360
55-64	194,650
45-54	229,290
35-44	159,370
25-34	99,610
15-24	143,180
5-14	159,610
0-4**	135,370
TOTAL	1,418,820

Numbers above were taken from a March 1990 inventory and are subject to change.

* There are approximately 654,401 acres of timber on state forest lands in Eastern Washington.

** The classification also contains some acres that are used for rights of way and other nontimber uses.

TABLE 4
Effect of Changing Rotation Age on Harvest Levels
Western Washington Sustainable Even-Flow Harvest
Rotation by Current Ownership Groups



Policy No. 5: Harvest Levels Based on Volume

The preferred policy states:

The department's harvest calculations will be based on volume rather than acreage or other considerations. (current policy)

Alternative 1: The department's harvest calculations will be based on acreage rather than volume.

Alternative 2 is the no-policy option would allow the department to change the methods for calculating harvest levels each year (from volume to acreage and vice versa, etc.).

Background

The department currently calculates its harvest levels using volume, which it believes is the most accurate measure of income to the trust, rather than acreage.

Comparison of Alternatives and Environmental Impacts

Volume control (using board feet as a measure) is the **preferred policy** (current policy). The department believes that the even-flow timber harvest policy (see Policy No. 4) can best be met by using volume as a measurement.

Any other method (such as acreage) would not allow the department to meet the even-flow requirements. Using acreage, for instance, is too unpredictable a measure from which to estimate a stable harvest of timber. The reason is that state forest lands are varied in topography, soil condition, age of timber, etc. The amount of timber on a given acreage changes considerably from site to site. Thus, the department needs to select and use the most reliable form of measurement to calculate an even-flow harvest. It believes volume meets that criteria.

Alternative 1 is different from the preferred policy because it directs the department to base its decisions on acreage.

Alternative 2, the no-policy option, would allow the department to choose different calculation methods within the planning period.

There are no significant adverse environmental impacts from any of the policy options. This subject applies more to internal department procedures and will not affect the rate or type of timber harvest. All three options result in approximately the same amount of activity (i.e., timber sales). The reason is that this policy deals with the form of measurement; Harvest Policy No. 1 deals with the issue of harvest levels.

Policy No. 6: Western Washington Ownership Groups

The preferred policy states:

The department will establish a sustained, even-flow harvest level within specified ownership groups in Western Washington, as follows:

1. Forest Board Transfer lands, where the harvest will be calculated by individual counties.
2. Federal Grant lands and Forest Board Purchase lands, where the harvest will be calculated by regions.
3. The Capitol State Forest, which will be considered a separate ownership group.
4. The Olympic Experimental State Forest, which will also be considered a separate ownership group.

Two alternatives were considered by the department.

Alternative 1: The department will establish a sustained, even-flow harvest level within specified ownership groups. These groups include:

1. Forest Board Transfer lands, where the harvest will be calculated by combining all 16 counties into one consolidated group.
2. Federal Grant lands and Forest Board Purchase lands in Western Washington, where the harvest will be calculated by combining five regions into one consolidated group.
3. The Capitol State Forest, which will be considered a separate ownership group.
4. The Olympic Experimental State Forest, which will also be considered a separate ownership group.

This is the current policy.

Alternative 2, the no-policy option, would allow the department to adopt any number of ownership groups for the planning period and change the groups without receiving Board of Natural Resources approval.

Background

In the past, the department consolidated all Forest Board Transfer lands into one ownership group, which consisted of all Western Washington counties (as a consolidated ownership group). The department then based its timber harvest calculations on this ownership groups. The department now intends to set sustainable harvest levels for each of the 16 individual county in Western Washington.

The above policy will also affect how the department treats Federal Grant and Forest Board Purchase lands in Western Washington. In the past, the department applied its sustained even-flow decisions to two, large ownership groups in Western Washington. The department now intends to set harvest levels for five separate regions in Western Washington.

The **preferred policy** will not change the Eastern Washington ownership groups. See Policy No. 7 for a description of these groups.

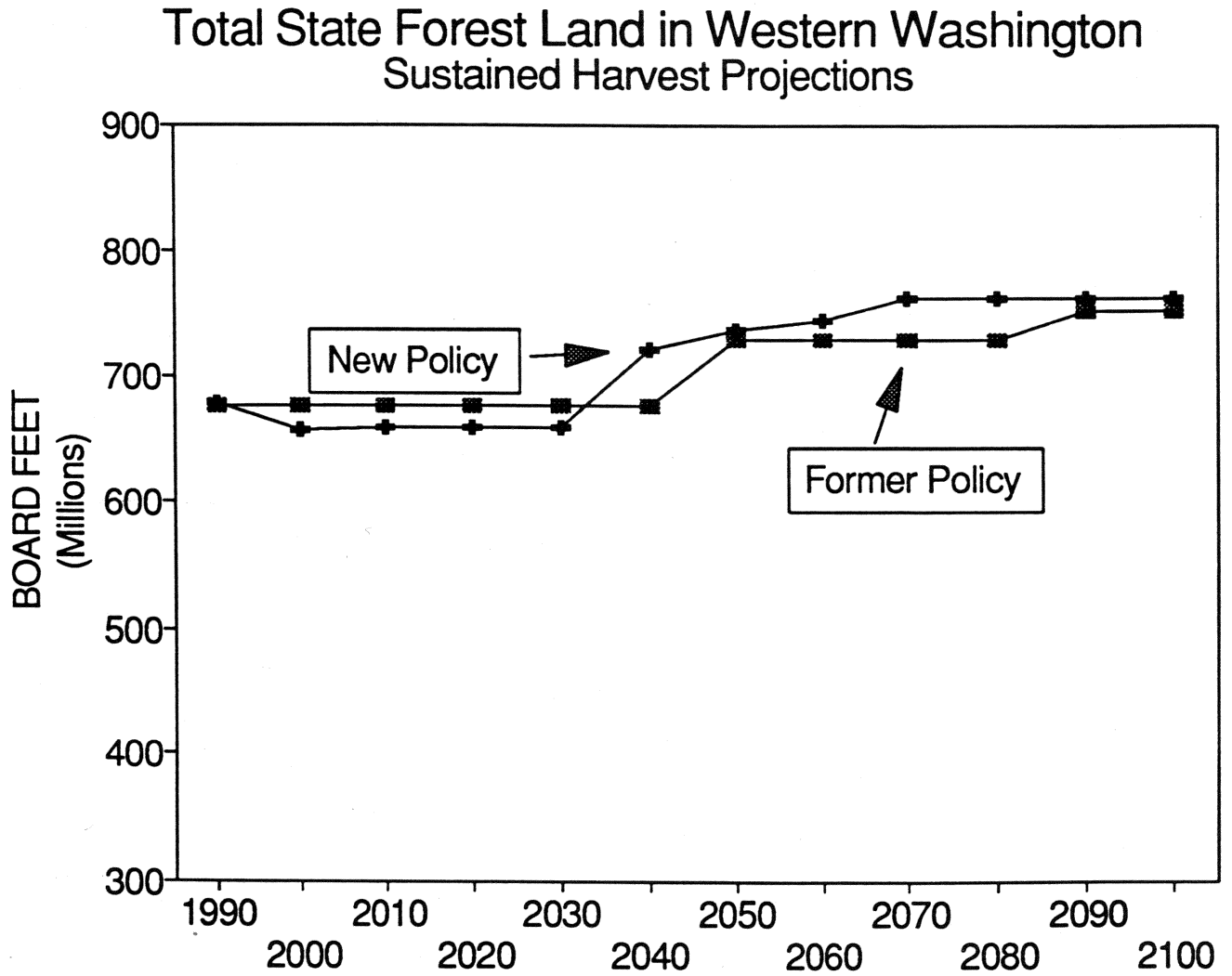
Comparison of Alternatives and Environmental Impacts

The policy, however, will not significantly affect the overall amount of timber harvest on a statewide basis in the next 10 years, as illustrated by the following table.

Table 4A compares the existing policy with the new proposed policy. As the table shows, approximately the same amount of timber will be harvested under either the preferred (proposed) policy or Alternative 1 (current policy). The difference between the two policies amounts to a 20 million board-foot difference between now and the year 2030.

The main purpose for this change is to stabilize the economic and environmental impacts to the counties by creating sustainable harvest units in every county that has Forest Board Transfer land and in each department region with Federal Grant and Forest Board Purchase land.

TABLE 4A
 Comparison of Alternatives
 Total State Forest Land in Western Washington
 Sustained Harvest Projections



The policy change will provide more stable income and employment for timber-dependent communities in these counties.

Finally, the policy will assist neighboring landowners, tribes, public agencies and citizens in assessing the environmental impacts of harvest decisions. In the past, the amount of timber harvested on state forest land in these counties was part of a larger department harvest plan. Now, each county will have its own sustainable harvest plan, which can be reviewed by county officials and other interested parties.

Under the preferred policy, the ownership groups described above, when combined with the sustainable harvest policy (Policy No. 4), will affect the rotation (cutting) age of timber on those properties. On Western Washington forest lands, the department intends to use an average rotation age of 60 years in the calculation of its harvest flow. There are, however, some exceptions. In order to meet specified silviculture objectives, such as diversity, the department may cut some stands as early as 45 years.

Because the combinations of rotation age, ownership groups and harvest priorities are infinite, the department is considering only the two alternatives. These ownership groups need to be considered as a part of a package. If the department varied one of the ownership groups (for example, omitting the Olympic Experimental State Forest), it would have a new alternative.

A separate sustainable harvest is not calculated for individual conifer or hardwood tree species. However, unlike conifer species, red alder stands begin to deteriorate after age sixty, so a special effort will be made to harvest stands of this species before volume or quality loss occurs.

Under Alternative 1 (current policy), the level of activity will vary widely from county to county and from region to region in Western Washington. In general, the more harvest activity, the more environmental impacts will be detected.

Alternative 2, the no-policy option, is so flexible that it is difficult to assess specific environmental impacts. It would likely lead to new and/or constantly-changing ownership groups, which in turn would make a sustainable harvest more difficult to accomplish and would make an assessment of environmental impacts more difficult.

Tables 5-20 show the effect on the 16 individual counties of the existing and proposed method of calculating the sustainable harvest of Forest Board Transfer lands in that particular county.

The existing method requires the department to calculate a sustainable, even-flow harvest for the counties that have Forest Board Transfer lands. In Western Washington, these counties are currently combined into one ownership group; the harvest level is shown by the "current policy" line on the following tables. The preferred policy is to calculate a sustainable, even-flow harvest for each of the 16 individual counties in Western Washington that have Forest Board Transfer lands, as shown by the "proposed policy" line.